DOCUMENT RESUME

ED 209 287 TM 810 786

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TITLE Validation Report for the Title IV-C Health Through Science Project, 1979-80.
INSTITUTION Muscogee County School District, Columbus, Ga.
PUB DATE 80
NOTE 36p.

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Elementary School Science; Elementary Secondary Education; *Evaluation Methods; *Health Education; *Program Descriptions; *Program Effectiveness; *Program Evaluation; Secondary School Science; *Student Educational Objectives

ABSTRACT

Three objectives were identified regarding the Health Through Science Project, a comprehensive K-12 health project designed to increase student knowledge and understanding of health topic. Topics composing the core curriculum of the project were nutrition, safety, family living skills, personal hygiene and health, and human reproduction. Upon full implementation of the project, students were expected to achieve gains in health knowledge statistically higher than those made by non-participating students. This report concludes that such objectives were achieved beyond the expected levels. Experimental students outperformed control students at each of the five levels and at each grade. Experimental students also exhibited a statistically significant increase in health knowledge.
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VALIDATION REPORT FOR THE TITLE IV-C HEALTH THROUGH SCIENCE PROJECT

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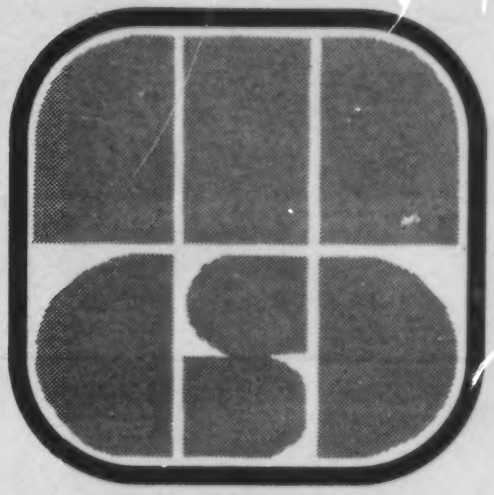

MUSCOGEE COUNTY SCHOOL DISTRICT
COLUMBUS, GEORGIA

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VALIDATION REPORT FOR THE TITLE IV-C HEALTH THROUGH SCIENCE PROJECT

1979 - 80

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CHAPTER I

PURPOSE AND OBJECTIVES

The Health Through Science Project is a comprehensive K-12 health project designed to increase student knowledge and understanding of health topics. The project was developed in response to an acknowledged need in Muscogee County for more effective health education in the schools. A health curriculum was designed for instruction on appropriate topics at each grade level. Some topics composing the core curriculum of the project were nutrition, safety, family living skills, personal hygiene and health, and human reproduction.

The Health Through Science Project has been in the process of development for three years. During the first year of the project, the major task was the development of the curriculum guides for each grade level. These were completed for use during the second year of the project. The focus of the second year was the piloting of the health curriculum in selected schools as well as the development of objective-based health knowledge instruments, the Muscogee Health Tests, to assess student achievement in the area of health. These locally developed health tests were examined for validity and reliability and were modified in an appropriate manner prior to the beginning of the third year of the project. During the third year of the project, the number of students receiving the health curriculum was expanded and the project was considered to be fully implemented with these students.

All students participating in the project were expected to achieve gains in health knowledge which were statistically higher than gains made by similar students not participating in the project. The experimental groups were expected to demonstrate gains in health knowledge at the .01 level of statistical significance and better than the comparison groups at the .10 level.

C

The specific project outcomes were identified as follows:

Objective 1: Students in grades K-6, receiving instruction under the Health Through Science Program for at least one school year, will exhibit significantly higher gain scores (.10 level) than students receiving the standard Muscogee County curriculum. The experimental groups were also expected to demonstrate gains in health knowledge which were statistically significant (.01 level).

Objective 2: Students in grades 7-8, receiving instruction under the Health Through Science Program for at least one school year, will exhibit significantly higher gain scores (.10 level) than students receiving the standard Muscogee County curriculum. The experimental groups were also expected to demonstrate gains in health knowledge which were statistically significant (.01 level).

Objective 3: Students in grades 9-12, receiving instruction under the Health Through Science Program for at least one semester, will exhibit significantly higher gain scores (.10) than students receiving the standard Muscogee County curriculum. The experimental groups were also expected to demonstrate gains in health knowledge which were statistically significant (.01 level).

The student objectives previously cited are product objectives whose successful outcomes are dependent on several process objectives. These include effective implementation of the Health Through Science curriculum by project teachers and cooperation by and enthusiasm for project activities by project principals, teachers, and the community.

The balance of this report describes in detail pertinent aspects of the Health Through Science Project. These include the program activities (Chapter II), evaluation design (Chapter III), and the results and analysis (Chapter IV). Chapter V provides a summary of the project and recommendations for further refinement.

CHAPTER II

PROGRAM ACTIVITIES

The implementation of the Health Through Science Project necessitated specific involvement of both project teachers and students. Assessment of the success of the project may be made, in part, by examining the role of the teachers and the role of the learners as each participated in the project. Further assessment may be made by reviewing the staff development activities which were held for project personnel and the type of curriculum materials used and the frequency of their use. A final area of consideration when noting the success/effectiveness of the project is the involvement and awareness of parents and community in the project.

Student and School Staff Participation

Students participating in the Title IV-C Health Through Science Project were acquainted with the various health topics specified through the curriculum guides. These health concepts were integrated into the regular science classes; thus much of the instructional time designated for science was spent on health topics integrated into the science curriculum. The students who participated in the project used textbooks and supplementary materials specified by the curriculum guides. When possible, "hands-on" experience with instruments such as blood pressure cuffs were used to reinforce students' learning. Through use of the supplementary materials, activities, and instructional time, the students were expected to obtain the health knowledge necessary to successfully meet the curriculum objective for each health topic. Specific student objectives and activities can be found in the curriculum guides (available in the project director's office).

Teachers involved in the Title IV-C Health Through Science Project were expected to integrate the teaching of the Health Through Science

curriculum into the regular science curriculum. Project teachers at each grade level spent varying amounts of instructional time on project curriculum, with average times ranging from 14.2 hours at the kindergarten level to 82.5 hours at the ninth grade level. A summary of the average time spent per grade is presented in table 1.

Table 1

Average Number of Title IV-C Health Through Science Activities and Average Time Utilized Per Grade Level

Grade level	Number of activities	Time (hours)
Kindergarten	53.1	14.2
First	51.1	23.1
Second	55.1	19.3
Third	44.4	19.6
Fourth	37.1	18.0
Fifth	29.8	22.6
Sixth	34.1	33.1
Seventh	25.0	28.7
Eighth	43.2	43.2
Ninth (Semester)	---	82.5
Tenth, Eleventh & Twelfth Elective (Semester)	---	82.5

Project teachers were expected to address all of the instructional objectives specified in the curriculum guide during the course of the year (or semester for Grades 9-12).

Project teachers were asked to provide feedback to the project director concerning their perceptions of the effect of Health Through Science Project on the students in their classrooms. Teachers were asked

to rate three areas on a 5-point scale: (a) increased knowledge of health and safety by students, (b) improved health and safety practices by students, and (c) improved student attitudes about health and safety. Sixty project teachers responded. Of responding teachers, 91% felt strongly that students had increased their knowledge about health and safety; 75% of the teachers perceived students as having improved their health and safety practices; and 68% of the teachers thought that student attitudes toward health and safety had improved. These results indicate that a large majority of project teachers feel that students are obtaining improved knowledge, attitudes, and habits as related to health. Thus, from the perceptual view of the teachers, the students involved in the project are meeting the goals of the project.

In order to provide project teachers with maximum opportunity to understand the project philosophy and to obtain additional information about health concepts, several inservice workshops were held during the year. At the beginning of the school year, an inservice activity to acquaint project teachers with the project philosophy and objectives was held. This staff development activity is considered essential for implementation of the project. A second type of staff development activity was the informational interaction between project teachers and the project director at each of the project schools. During these meetings, the project director discussed with project teachers the contents and appropriate use of curriculum guides. He also demonstrated and explained much of the supplementary materials which had been purchased to aid project teachers. Further, the project director explained the process of project validation to teachers so that they could get an overview of the scope of the project (see Appendix A for further details). These meetings were described by project teachers as being very helpful. A third type of staff development activity held was "special topics" workshops. These activities were designed to provide project teachers with additional information and expertise in teaching health concepts. One of the activities was a seminar offering instruction on the process of teaching decision-making skills and attitude development within the framework of health education. This seminar was conducted by Dr. Spear and Mr. Ney, the project Advisory Panel from Indiana State University (see

Appendix B for further details). Two other "special topics" inservice activities were held for specific grade levels. These dealt with procedures for taking blood pressure for sixth and seventh grade project teachers and a dental health workshop held for project teachers from Grades K-4 (see Appendices C and D for further details). In summary, several types of staff development activities were held. However, a survey of project teachers indicated that project implementation could be achieved by an orientation to the project and the availability of a curriculum specialist for consultation with teachers.

Although the evaluation design stated that staff development activities be held for principals of project schools in order to foster positive attitudes toward the project, no formal activities were held specifically for principals. However, principals were contacted informally by the project director to discuss the implementation of the project in individual schools as well as being invited to attend all staff development activities held for project teachers. Assessment of principals' attitudes toward "Health Education" was made by the administration of a semantic differential. These data indicate that principals held a neutral attitude toward health education.

Curriculum Materials

Curriculum guides, which prescribed the core of the project, were developed primarily by a group of project teachers. The curriculum guides provide educational objectives which are behaviorally stated for each of the health topics. In addition, activities and materials which would be useful in helping students master the objectives were suggested in the guides. Most of the curriculum materials were traditional materials used for teaching health. However, the latest and most up-to-date tests and supplementary materials were purchased. Many of the materials provided made it possible for students to have "hands-on" experience in the health area. Some examples of such materials were fat-o-meters, a set of large teeth to demonstrate proper brushing techniques, and blood pressure cuffs. Textbooks, visual aids, and equipment were purchased to enhance the learning process for students. Generally, teachers reported that their

students had enjoyed using the health curriculum materials in their classes.

Health Through Science curriculum materials were housed primarily in three places. Some materials were distributed directly to project teachers. Resource materials which could be used by all project teachers in a school were housed in the school library and were distributed only to project students. Curriculum materials such as films were kept in the Muscogee Materials Center. Lists of supplemement materials which were available were developed and made available to project teachers.

Project Management

The management system of the project was designed to provide direction for the program. The management duties fell primarily to the project director, the Advisory Panel, and the Advisory Council.

The tasks assigned to the director were to implement, operate, and evaluate the project by means of planned and sequential procedures. Thus, the director was responsible for managing the development of and making final revisions on the curriculum materials to be used in project classes. He was also responsible for selecting project teachers and providing the staff development necessary for their successful participation in the project (see Teacher section of this chapter for detailed information). He was, further, to establish rapport with principals of project schools which would lead to the development of positive attitudes toward the project by principals. This was done, as previously mentioned, primarily on an informal basis.

Another task of the project director was to implement a public relations campaign to acquaint the community with the Health Through Science Project. In order to meet this objective, the project director appeared as a guest on several local television programs as well as being interviewed for a newspaper article. Community awareness was also encouraged by the project schools' relationships with parents of project students. In one school, inclusion of health-related ideas was included in a monthly newsletter sent home to the parents. Finally, the director was to contract a third-party evaluator to assess the effectiveness of the project. The director engaged an evaluation team

from The University of Alabama under the direction of Dr. James E. McLean. In general, the project director has fulfilled the specific duties assigned to him. Project teachers reported that the project director was easily accessible for consultation about the project and was efficient in obtaining the materials that they needed.

The Advisory Panel, composed of two nationally-known health educators, provided assistance in the development of the curriculum guides and in staff development programs. Further, they provided input on the content and validity of the achievement test items. The Advisory Panel also helped make alterations in the Health Through Science program so that validation standards could be met. The purpose served by this panel was primarily developmental in nature and would not be essential for an adopter.

The Advisory Council included a representative sample of teachers, principals, local business persons, relevant community agencies, parents, and other interested citizens. Members were appointed by the project director and approved by the Muscogee County Board of Education. The duties of the council included: (a) seeing that the health program was developed with the proper perspective to meet the needs of the community and (b) advising the director on various aspects of the project. An advisory council is suggested for adopters, although it would not be essential to a project's success.

Summary

The project activities were implemented primarily by teachers under the supervision of the project director. He was given direction and suggestions by the Advisory Panel and Advisory Council. The crux of the Health Through Science Project was the integration of curriculum materials specifying the desired course of study for project classes into traditional science classes. Staff development activities were held to maximize the performance of project teachers. Community awareness and cooperation was encouraged. These elements were considered essential in the successful implementation of the Health Through Science Project.

CHAPTER III

EVALUATION DESIGN

At the beginning of the third year of the project, the Health Through Science curriculum was implemented at the elementary, junior high, and high school levels. Schools which participated in the project were selected by the project director in consultation with the evaluation team and the Muscogee Department of Research and Evaluation so that a cross-section of the Muscogee County School District was obtained. Thus, schools involved in the project were considered to be representative of the school system.

Since the evaluation plan utilized a pretest-posttest-control group design, appropriate control groups were selected. The control group students were selected in two ways. One group of control students was selected randomly from each grade at each project school. A second group of students was selected from a school which had been matched with the project school on two variables: (1) socioeconomic status as measured by participation in the free lunch program and (2) ability level as measured by the Otis-Lennon Mental Abilities Tests (in Grades 4-12). (Students in Grades K-3 were not matched on ability level as the Otis-Lennon is not appropriate for these grades.) The schools selected as the out-of-school controls were the schools matching project schools most closely on these two variables.

The project curriculum was implemented in 9 of the 40 elementary schools, in 3 of the 9 junior high schools, and in 2 of the 8 high schools in Muscogee County. Within the selected schools, project teachers were obtained either by random selection or from among teacher volunteers. Pretesting for all groups occurred near the beginning of the school year. Posttesting was conducted for Grades K-8 at the end of the school year. Posttesting for Grades 9-12 occurred at the end of the first semester. Analyses, using t-test procedures, were performed to determine if the gains in health knowledge which had taken place were

significant and if they were significantly greater than those for nonparticipating students. Table 2 presents a summary of the data collection schedule.

Table 2

Data Collection Schedule

Obj.	Evaluation instruments	Data collection	Data analysis
1	Muscogee Health Test Levels I, II, III	Pretest October, 1979 Posttest April, 1980	*t*-test for each level and each grade within the level
2	Muscogee Health Test Level IV	Pretest October, 1979 Posttest April, 1980	*t*-test for each level and each grade within the level
3	Muscogee Health Test Level V	Pretest October, 1979 Posttest January, 1980	*t*-test for each level and each grade within the level

Note: Both experimental and control students were tested during the same week.

Evaluation Instruments

The evaluation instruments used to assess the success of the project were locally developed health knowledge instruments--the Muscogee Health Tests. The Muscogee Health Tests were based directly on instructional objectives specified in the curriculum guide. The grade levels K-12 were grouped into five categories which composed the five tests. Level I for Kindergarten-Grade 1 was composed of multiple choice picture items. The other tests, Level II for Grades 2-3, Level III for Grades 4-6, Level IV for Grades 7-8, Level V for grades 9-12, were composed of written multiple choice items. These tests were the instruments used to assess

the effectiveness of the project in terms of overall gains in student health achievement.

Development of the Muscogee Health Tests was accomplished primarily by a committee of project teachers in conjunction with the project evaluators. A complete description of their development can be found in the Evaluation Report of the 1978-79 Health Through Science Title IV-C Project. Project teachers received instruction in writing multiple choice test items during an item-writing workshop provided by the evaluators. Test items were written to correspond to each of the behavioral objectives stated in the curriculum guides. The evaluation team selected items which compose the tests at each level. Reliability data were computed on the posttests given in May, 1979. Item analyses indicated items which were not functioning adequately. These items were modified or deleted prior to pretest administration in October, 1979.

Test reliability data on the revised instruments were obtained from an analysis of pretests administered in October, 1979 and posttests administered in April, 1980. Item analyses were performed on each of the five tests to determine the item difficulty and item discrimination of each test. A coefficient alpha reliability measure was computed to obtain an estimate of internal consistency for each test. Table 3 presents the reliabilities of the five tests.

The tests were packaged and delivered by the project director. Each test had an inventory control number on it which was recorded when delivered and checked upon return. Directions for their use which were written by the evaluators were also provided. Levels I and II were marked on the test booklet and subsequently keypunched and verified by the Department of Research and Evaluation, Muscogee County School District. Neither of these levels requires the student to be able to read. Levels III-V were taken on premarked optical scanning sheets, scored using the school district's IBM 3881 scanner, and analyzed at The University of Alabama.

Table 3

Reliabilities of the Muscogee Health Tests

	Number of Items*	Alpha coefficient
Level I		
Total test	36	86
Grade K items only	23	.83
Grade 1 items only	23	.76
Level II		
Total	41	.82
Grade 2 items only	19	.75
Grade 3 items only	22	.69
Level III		
Total test	69	.84
Grade 4 items only	23	.67
Grade 5 items only	16	.51
Grade 6 items only	26	.70
Level IV		
Total test	38	.72
Grade 7 items only	22	.65
Grade 8 items only	13	.41
Level V		
Total test	85	.90
Grade 9 items only	48	.84
Grades 10-12 items only	34	.77

*Appendix E identifies the specific items for each grade level.

Summary

The evaluation plan called for a pretest-posttest-control group design. Each control group had students from two sources: students from within the project schools and students from a school similar to the project school in socioeconomic status and ability level. The

evaluation instruments used to assess the effectiveness of the project were the Muscogee Health Tests. These health tests were developed and validated locally.

CHAPTER IV

RESULTS AND ANALYSIS

The effectiveness of Health Through Science Project was assessed by investigating gains in health knowledge made by experimental students. The results are addressed for each of the three project outcome objectives.

Objective 1: (re: Grades K-6)

> Students in grades K-6, receiving instruction under the Health Through Science Program for at least one school year, will exhibit significantly higher gain scores (.10 level) than students receiving the standard Muscogee County curriculum. The experimental groups were also expected to demonstrate gains in health knowledge which were statistically significant (.01 level).

Pretest-posttest gains of the experimental groups were examined to determine if students participating in the Health Through Science Project achieved gains in health knowledge which were statistically significant at the .01 level. Data analyses, using a paired t-test procedure, indicated that students in the experimental groups did achieve gains which were statistically significant at the .001 level or better.

Additional data analyses, using independent t-tests, indicated that the gains of the experimental groups at each grade exceeded those for the control groups at the .01 level or better except in one instance. Grade 2 experimental students significantly outperformed the control students (.001 level) when the entire 61 items of the test were considered. However, they did not outperform significantly the control group when only the 18 items relating to second grade objectives were considered. It should be kept in mind that the test reliability was very low when only the 18 items were used. These results are shown in Tables 4, 5, and 6. Pretest differences between the groups were minor.

Table 4

Level I Results

		Gain				Comparison	
	N	Mean	SD	t	Probability level	t	Probability level
Level I							
Kindergarten							
Experimental	184	5.84	4.23	15.78	<.001		
						8.91	<.001
Control	337	2.90	3.25				
Kindergarten items only							
Experimental	184	3.25	3.00	14.68	<.001		
						6.45	<.001
Control	337	1.67	2.45				
First grade							
Experimental	230	9.22	5.28	10.21	<.001		
						10.21	<.001
Control	290	4.60	4.98				
First grade items only							
Experimental	230	5.42	3.37	24.40	<.001		
						9.52	<.001
Control	290	2.57	3.40				

Table 5

Level II Results

		Gain				Comparison	
	N	Mean	SD	t	Probability level	t	Probability level
Level II							
Second grade							
Experimental	268	6.12	4.87	17.45	<.001		
						8.31	<.001
Control	217	2.78	3.74				
Second grade items only							
Experimental	268	13.09	3.06	69.97	<.001		
						-1.87	
Control	217	13.60	3.00				
Third grade							
Experimental	220	6.21	5.28	17.45	<.001		
						7.40	<.001
Control	323	3.32	3.83				
Third grade items only							
Experimental	220	2.43	3.63	10.02	<.001		
						5.70	<.001
Control	323	.90	2.70				

Table 6

Level III Results

		Gain				Comparison	
	N	Mean	SD	t	Probability level	t	Probability level
Level III							
Grade 4							
Experimental	183	8.74	7.40	15.98	<.001		
						8.04	<.001
Control	372	3.91	6.27				
Grade 4 items only							
Experimental	183	3.02	3.47	11.78	<.001		
						5.31	<.001
Control	372	1.44	3.19				
Grade 5							
Experimental	241	8.48	7.31	18.00	<.001		
						7.63	<.001
Control	357	4.26	6.15				
Grade 5 items only							
Experimental	241	1.52	2.80	8.46	<.001		
						1.99	<.047
Control	357	1.08	2.60				

Table 6 Continued

		Gain				Comparison	
	N	Mean	SD	t	Probability level	t	Probability level
Grade 6							
Experimental	203	8.40	8.10	14.79	<.001		
						6.99	<.001
Control	362	4.24	5.83				
Grade 6 items only							
Experimental	203	3.50	4.32	11.56	<.001		
						4.05	<.001
Control	363	2.11	3.69				

Objective 2: (re: Grades 7-8)

Students in grades 7-8, receiving instruction under the Health Through Science Program for at least one school year, will exhibit significantly higher gain scores (.10 level) than students receiving the standard Muscogee County curriculum. The experiment groups were also expected to demonstrate gains in health knowledge which were statistically significant (.01 level).

An examination of the pretest to posttest gains of the experimental groups was conducted to determine if students participating in the Health Through Science Project achieved gains in health knowledge which were statistically significant at the .01 level. Data analysis, using the paired t-test procedure, indicated that the experimental groups did achieve gains which were statistically significant beyond the .01 level.

Additional data analyses, using independent t-tests, indicated that the gains of the experimental groups at each grade exceeded those for the control groups at the .01 level or better. This was true when the total

test was used and when only the items relevent to a particular grade were used. Again, pretest differences between the experimental and control groups were minor. Table 7 presents these results.

Table 7

Level IV Results

		Gain				Comparison	
	N	Mean	SD	t	Probability level	t	Probability level
Level IV							
Grade 7							
Experimental	141	3.25	4.85	7.96	<.001		
						4.35	<.001
Control	250	1.25	4.06				
Grade 7 items only							
Experimental	141	1.84	3.85	5.69	<.001		
						3.07	<.002
Control	250	.82	2.73				
Grade 8							
Experimental	172	3.55	4.71	9.88	<.001		
						4.48	<.001
Control	392	1.84	3.91				
Grade 8 items only							
Experimental	172	1.97	3.07	8.40	<.001		
						5.57	<.001
Control	392	.58	2.55				

Objective 3: (re: Grades 9-12)

Students in grades 9-12, receiving instruction under the Health Through Science Program for at least one semester, will exhibit significantly higher gain scores (.10) than students receiving the standard Muscogee County curriculum. The experimental groups were also expected to demonstrate gains in health knowledge which were statistically significant (.01 level).

Pretest to posttest gains were analyzed to determine if students participating in the Health Through Science Project achieved gains in health knowledge which were statistically significant. Data analysis, using a paired t-test procedure, indicated that students in the experimental group achieved gains which were statistically significant at the .01 level or better.

An additional data analysis using independent t-test procedures indicated that gains of the experimental group at each grade level exceeded those for the control groups beyond the .05 level of significance. Differences in pretest means were minimal. Table 8 presents these results.

Table 8

Level V Results

		Gain				Comparison	
	N	Mean	SD	t	Probability level	t	Probability level
Level V							
Grades 9-12							
Experimental	200	6.67	11.26	8.39	<.000		
						5.51	<.000
Control	549	1.63	10.45				

Table 8 Continued

		Gain				Comparison	
	N	Mean	SD	t	Probability level	t	Probability level
Grade 9 items only							
Experimental	101	4.68	8.20	5.75	<.000		
						2.56	<.012
Control	329	2.38	7.01				
Grade 10-12 items only							
Experimental	99	2.56	4.00	6.33	<.000		
						5.65	<.000
Control	220	- .24	4.28				

Summary

The three product objectives of the project were achieved beyond the stated levels. Experimental students were found to outperform control students at each of the five levels and at each grade. Further, experimental students exhibited a statistically significant increase in health knowledge. Thus, this project was successful in meeting each of its product objectives.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

The Health Through Science Project, of Muscogee County, Georgia, during its third year of the implementation, attempted to integrate health concepts into the regular science curriculum. Students participating in the project were expected to master the instructional objectives specified in the curriculum guides. The data show that project students at all five levels (Grades K-12) did, in fact, achieve gains in health knowledge which were statistically significant at the .01 level or better. Gains for the experimental group exceeded those for the control groups for Grades K-12 and were statistically significant at or beyond the .05 level.

The Health Through Science Project appeared to have educational as well as statistical significance. This was demonstrated by the fact that students in the experimental groups achieved gains which were statistically significant when compared with the comparison groups. In addition, students in the experimental groups increased the number of items they answered correctly from pretest to posttest by approximately twice as many as did the control groups. This provides an indication of the amount of learning achieved for those students involved in the Health Through Science Program.

Project teachers described the project as very helpful to students. Approximately 85% of the project teachers indicated that they believed their students were attaining increased knowledge about health education, improved health and safety practices, and improved attitudes about health and safety.

Student attrition in the project was held to about 10% or below at each of the five levels. This was based upon the total number of students who took the pretest for which complete pretest-posttest data were available. Coding and recorded errors also contributed to the attrition rate.

Recommendations

The following recommendations are based upon information gathered by the evaluators during the three years of the Health Through Science Project. Each is a result of considering data from many sources.

Recommendation 1. During the developmental years of the Health Through Science Project, pre- and post-testing was handled through the project director's office. However, as the project moves into the dissemination stage, it may be more appropriate for this testing, as is other testing in the county, to be handled through the Office of Research and Evaluation.

Recommendation 2. Analyses of the Muscogee Health Tests at each of the five levels have indicated that the tests have adequate technical characteristics. However, further analysis of the tests has indicated ways in which to improve items in each level of the test. Incorporation of the experience with almost 10,000 students will surely improve the tests.

Recommendation 3. Specific guidelines for teachers should be developed in order that they may keep records of instructional time spent on each curriculum objective. One method for accomplishing this would be to designate a specific place in the curriculum guide where the teachers could enter the instructional time spent on the Health Through Science objectives on a daily basis.

APPENDIX A

MUSCOGEE COUNTY SCHOOL DISTRICT

COLUMBUS, GEORGIA

MEMORANDUM

TO: Principal, Title IV-C School

FROM: Dr. Ronnie Shehane, Coordinator
Title IV-C Health Project

DATE: December 5, 1979

RE: Inservice meeting on November 20, 1979

I met with the teachers piloting the Title IV-C Health Program in two sessions. The K-2 teachers met with me in one session and the 3-6 met with me in another session.

The following were points of discussion:

1. Teachers should begin implementation by selecting an objective from the course guide and utilizing the activities listed. The importance of beginning was stressed.
2. The bulk of the materials listed in the course guide are housed in the media center at Georgetown. Some materials (16mm films and some filmstrips) are housed at IMC.
3. Familiarity with the course guide and materials was stressed.
4. Teachers were asked to emphasize the measurable objectives in the course guide during all planning for implementation.
5. Teachers were asked to contact Ms. Sellers when ordering Title IV-C materials from IMC.
6. We discussed what the validation process meant.
7. Teachers were asked to be prepared to give their opinions regarding the amount of time which should be devoted to each objective on their grade level.
8. The content listed in the course guide is listed for the benefit of the teachers.
9. Teachers are to contact me if they have problems or concerns.

Appendix A Continued

All of your pilot teachers were present for the appropriate session.

Mrs. Carol Woolbright was most helpful during the sessions and displayed a very positive attitude toward implementing the program.

RS:jc

APPENDIX B

MUSCOGEE COUNTY SCHOOL DISTRICT

COLUMBUS, GEORGIA

MEMORANDUM

TO: Dr. Richard Spear, Chairman
Department of Health and Safety

FROM: Dr. Ronnie Shehane, Coordinator
Title IV-C Health Project

DATE: November 29, 1979

RE: Inservice Program of December 5-8, 1979

The goals of the inservice program are:

1. Instill in teachers the concept that decision-making and attitude development are important components of a health curriculum.

2. Communicate to teachers how decision-making and attitude development are basic components of the Title IV-C Health Program.

3. Show teachers how to incorporate decision-making and attitude development into their teaching of health.

4. Reinterate the importance of health education in today's curriculum.

The schedule for the Inservice Program is as follows:

Wednesday, December 5 from 4:00 - 6:00
Room 4 at the Claflin Center
Kindergarten - Second Grade Teachers

Thursday, December 6 from 4:00 - 6:00
Room 25 at the Claflin Center
Third - Sixth Grade Teachers

Saturday, December 8 from 8:30 - 11:30
Claflin Auditorium
All Secondary Title IV-C Teachers

Appendix B Continued

A copy of the course of study is being sent.

We are planning a night meeting with parents, teachers, principals, and interested health agencies for December 6 at 7:00. You will be asked to speak on "The Status of Health Education in America Today" with a time period of 20-25 minutes.

I look forward to seeing you and Walt next week.

RS:jc

APPENDIX C

MUSCOGEE COUNTY SCHOOL DISTRICT

COLUMBUS, GEORGIA

MEMORANDUM

TO: All Sixth & Seventh Grade
Title IV-C Experimental Teachers

FROM: Dr. Ronnie Shehane, Coordinator
Title IV-C Health Project

DATE: January 19, 1980

RE: Inservice

An inservice has been scheduled for January 28, 1980 at 3:45. We will meet in Room 2 at Fox Elementary School (3720 Fifth Avenue).

The inservice will address "procedures for taking blood pressure" and require approximately one hour.

Please attend.

RS:jc

APPENDIX D

MUSCOGEE COUNTY SCHOOL DISTRICT

COLUMBUS, GEORGIA

MEMORANDUM

TO: Elementary Principals &
Kindergarten-Fourth Grade
Teachers of Piloting Schools

FROM: Dr. Ronnie Shehane, Coordinator
Title IV-C Health Project

DATE: January 29, 1980

RE: Dental Health Workshop

The Dental Health Workshop to be given February 7, 1980 by Dr. Mike Helms will be at the Claflin Auditorium from 3:30 - 5:00.

Call my office by February 1, 1980 if you have any dental health topics you would like presented at the workshop

RS:jc

cc: Dr. Mike Helms

APPENDIX E

ITEMS FOR EACH GRADE ON THE FIVE LEVELS OF THE MUSCOGEE HEALTH TESTS

Test I		Test II*		Test III**		
Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
1	1	4	3	6	5	3
3	2	5	7	7	12	4
5	4	6	9	11	15	8
6	8	8	10	14	17	9
7	9	11	14	19	20	10
8	10	12	16	25	23	13
10	11	13	17	26	30	16
13	12	15	18	28	35	18
14	15	18	19	29	38	21
17	16	21	20	33	42	24
18	17	24	22	37	43	31
19	19	27	23	39	47	32
20	20	29	25	40	57	34
21	21	34	28	46	64	36
22	23	35	31	49	65	41
24	25	38	32	50	66	44
25	26	39	33	51		48
26	30	40	36	52		53
27	32		37	56		54
28	33		41	60		58
29	34		42	61		59
31	35		43	62		67
36	36			63		68
						69
						70
						71

*Test items 1 and 2 are samples.
Test items 26 and 30 are not represented by a measurable objective.

**Test items 1 and 2 are samples.
Test items 22, 27, 45, and 55 are not represented by a measurable objective.

Appendix E Continued

Test IV*		Test V*	
Grade 7	Grade 8	Grade 9	Grades 11 and 12
3	5	3	6
4	7	4	9
6	11	5	11
8	14	8	17
9	15	10	19
10	18	12	25
12	19	13	26
13	20	15	33
16	23	16	35
17	24	18	39
21	26	21	40
22	27	22	42
25	30	23	56
28	33	24	57
29	34	28	61
31	35	29	62
32		32	64
36		34	65
37		36	77
38		37	85
39		41	87
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		83	
		84	
		86	

*Test items 1 and 2 are samples.